

**PATENT COOPERATION TREATY
PCT**

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)
(PCT Article 36 and Rule 70)

REC'D 02 AUG 2005

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| Applicant's or agent's file reference 722199 | FOR FURTHER ACTION | | See Form PCT/IPEA/416 |
| International application No. PCT/AU2004/000773 | International filing date (day/month/year) 10 June 2004 | Priority date (day/month/year) 11 June 2003 | |
| International Patent Classification (IPC) or national classification and IPC Int. Cl. 7 A01J 5/00, 9/00 | | | |
| Applicant ANADIS LTD et al | | | |

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☒ (sent to the applicant and to the International Bureau) a total of 3 sheets, as follows:
 - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items:

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| <input checked="" type="checkbox"/> Box No. I | Basis of the report |
| <input type="checkbox"/> Box No. II | Priority |
| <input type="checkbox"/> Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> Box No. VI | Certain documents cited |
| <input type="checkbox"/> Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> Box No. VIII | Certain observations on the international application |

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|---|--|
| Date of submission of the demand 6 December 2004 | Date of completion of the report 18 July 2005 |
| Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustrialia.gov.au Facsimile No. (02) 6285 3929 | Authorized Officer A SEN Telephone No. (02) 6283 2158 |

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AU2004/000773

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This report is based on translations from the original language into the following language which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3 and 23.1 (b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
 - ☐ the international application as originally filed/furnished
 - ☒ the description:
 - pages 1-16 as originally filed/furnished
 - pages* received by this Authority on with the letter of
 - pages* received by this Authority on with the letter of
 - ☒ the claims:
 - pages as originally filed/furnished
 - pages* as amended (together with any statement) under Article 19
 - pages* 17-19 received by this Authority on 5 July 2005 with the letter of 5 July 2005
 - pages* received by this Authority on with the letter of
 - ☒ the drawings:
 - pages 1/7-7/7 as originally filed/furnished
 - pages* received by this Authority on with the letter of
 - pages* received by this Authority on with the letter of
 - ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to the sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to the sequence listing (*specify*):

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/AU2004/000773

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

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|-------------------------------|-------------|-----|
| Novelty (N) | Claims 1-23 | YES |
| | Claims | NO |
| Inventive step (IS) | Claims 1-23 | YES |
| | Claims | NO |
| Industrial applicability (IA) | Claims 1-23 | YES |
| | Claims | NO |

2. Citations and explanations (Rule 70.7)

Claims 1-23 meet the criteria set forth in PCT Article 33(2)-(4) for novelty, inventive step and industrial applicability. The prior art published before the priority date does not disclose, teach or suggest, singly or in combination, an apparatus for use with a milking machine with teat cups and pulsed vacuum source, the apparatus comprising a flexible bag with a collar, a housing for the bag, an inlet conduit extending into the housing and having an opening within the housing, a port providing vacuum from the vacuum source, means for retaining the collar of the bag and means for transfer of the vacuum from the port to the inlet conduit

Claims:

1. An apparatus for use with a milking machine comprising one or more teat cups and a vacuum source providing a pulsed vacuum in the teat cups, for
5 collecting a small volume of liquid for cold storage, the apparatus comprising:
a flexible bag comprising a collar defining an opening;
a housing for the flexible bag comprising an inlet conduit extending into
the housing for receiving the liquid from the one or more teat cups and
comprising an opening within the housing for delivering the liquid; a port for
10 providing a vacuum within the housing from said vacuum source; and
means for retaining the collar of the flexible bag about the inlet conduit so
that the bag receives liquid from the inlet opening; and
means for transfer of the vacuum from the port for providing a vacuum
with the housing to the inlet conduit when the collar of the flexible bag is
15 retainable about the inlet conduit by the means for retaining.
2. An apparatus according to claim 1 wherein the means for transfer of the
vacuum to the inlet conduit is selected from (a) providing space between the
collar and inlet conduit when the collar is retained about the inlet conduit by the
20 means for retaining and (b) providing a pressure equalising port in the inlet
conduit.
3. An apparatus according to claim 2 wherein the means for transfer of the
vacuum comprises a space between the collar and inlet conduit when the collar
25 is retained about the inlet conduit by said means for retaining.
4. An apparatus according to claim 1 wherein the collar is relatively rigid
when compared with the flexible bag.
- 30 5. An apparatus according to claim 1 wherein the dimensions of the collar
are greater than the adjacent portion of the inlet conduit to provide a space
there between to allow the vacuum applied to the housing to be transferred from
the vacuum port to said inlet conduit.

6. An apparatus according to claim 2 wherein the collar of flexible bag is retained with the inlet conduit extending into the flexible bag through the opening.
- 5 7. An apparatus according to claim 6 wherein the collar is sufficiently rigid to maintain its shape when retained about the inlet conduit by the retaining means.
- 10 8. An apparatus according to claim 7 wherein the flexible bag is a lay flat bag comprising two sides joined by a heat seal.
9. An apparatus according to claim 1 wherein the housing is sufficiently rigid to retain its shape under the vacuum from said milking machine.
- 15 10. An apparatus according to claim 1 wherein the receptacle has a volume in the range of from 500 ml to 50 litres.
11. An apparatus according to claim 1 wherein the receptacle has a volume in the range of from 5 litres to 40 litres.
- 20 12. An apparatus according to claim 1 wherein the receptacle has a volume in the range of from 10 to 25 litres.
13. An apparatus according to claim 1 wherein the housing comprises a lid comprising the top wall and a body comprising side and bottom walls.
- 25 14. An apparatus according to claim 12 wherein the lid comprises said fluid inlet comprising a conduit for receiving liquid extending down from said wall to provide an inlet port within the housing and wherein said lid further comprises the port for providing a vacuum.
- 30 15. An apparatus according to claim 1 wherein the inlet conduit is provided with retaining means for cooperating with the collar of the flexible bag.

16. An apparatus according to claim 15 wherein the flexible bag has a relatively rigid collar defining the bag opening and the collar comprises a flange adapted to cooperate with the retaining means to retain the collar for receiving liquid from the inlet.

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17. An apparatus according to claim 1 wherein the bag comprises an internal pocket to allow sampling of the bag contents.

18. An apparatus according to claim 17 wherein the internal pocket is formed by a heat seal extending from an edge of the bag.

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19. An apparatus according to claim 17 wherein the pocket has a volume of no more than 5% of the total volume of the flexible bag.

20. An apparatus according to claim 1 for collecting a small volume of liquid said apparatus further comprising:

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a plurality of teat cups;

a vacuum source for applying a vacuum to the teat cups for collecting liquid;

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a reservoir for collecting relatively large volumes of milk; and

a vacuum line for providing a vacuum to the vacuum part of the housing.

21. An apparatus according to claim 20 further comprising a pressure oscillation means for providing pulsating vacuum to the teat cups and a vacuum line downstream of the apparatus for collecting relatively small volumes of liquid.

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22. An apparatus according to claim 20 further comprising a case for receiving liquid filled bags for freezing to provide a thickness of less than 20 cm.

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23. An apparatus according to claim 1 when used in collection of liquid selected from the group consisting of ungulate colostrum, hyperimmune colostrum and specialty milks.